

### **REMARKS**

Applicant wishes to thank the Examiner for the attention accorded to the instant application, and respectfully requests reconsideration of the application as amended.

### **Formal Matters**

Claims 11-26 are the claims currently pending in the Application. Claims 11-16 and 20-22 are amended to more clearly recite the invention.

### **Claim Objections**

Claims 11, 14 and 20-22 are objected to because of informalities. These claims are amended to more clearly recite the invention by incorporating the Examiner's suggestions. Applicant respectfully requests that this objection be withdrawn.

### **Rejection of Claims Under 35 U.S.C. §112**

Claims 11-16 and 20 are rejected under 35 U.S.C. § 112, second paragraph, as indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection should be withdrawn based on the comments and remarks herein.

As discussed above, claims 11-16 and 20 are amended to more clearly recite the invention. Specifically, claims 11 and 20 are amended to recite that the structuring step includes "creating an architecture design of an LSI" to more clearly define the invention and provide antecedent basis for the "wherein said performance evaluation is used to modify the architecture design of the LSI" clause. Support for this amendment can be found in the specification on page 4, lines 17-19. Claims 16 and 20 have each been amended to replace "the foregoing steps" with a recitation of the appropriate individual steps (sequentially reading in the source code,

determining whether the source code is to be modified, modifying at least one element of the source code elements). Support for this amendment can be found in the specification on page 10, line 18 to page 11, line 8. Claim 20 is also amended to replace “a given processing rate that is already known” with “a known processing rate of the bus”. Support for this amendment can be found in the specification on page 4, lines 8-9 and on page 9, lines 12-16. Further, because claim 15 depends from claim 14, claim 15 is amended to recite “the new elements” representing hardware and software units. Thus, claims 11-16 and 20 are not vague and indefinite and applicant respectfully requests that this rejection be withdrawn.

#### **Rejection of Claims 11-21 and 23-26 Under 35 U.S.C. §103**

Claims 11-21 and 23-26 are rejected under 35 U.S.C. § 103(a) as unpatentable over Tammemaie et al., “AKKA: A tool for cosynthesis and prototyping”, The Institute of Electrical Engineers, UK, 1996 (hereinafter “Tammemaie”) in view of Raimi et al., U.S. Patent No. 5,604,895 (hereinafter “Raimi”), , and further in view of Chang et al., U.S. Patent No. 6,269,467 (hereinafter “Chang”). This rejection should be withdrawn based on the comments and remarks herein.

The present application provides an inventive method for producing a modified architecture design for an LSI by simulating hardware and software to evaluate proposed hardware and software configurations. A performance evaluation of at least one bus at a high-level stage of the computer architecture design and development process is undertaken. The evaluation process includes creating an evaluation function for counting data traffic that occurs on one bus, analyzing syntax, modifying at least one element of the source code based on the evaluation function, and performing the performance evaluation by simulating source code elements and counting the data traffic on the bus. The source code to be modified is determined

based on whether it represents writing data to variables that are defined in advance and loaded on to the bus to be evaluated.

The Examiner contends that Tammemae teaches “determining whether the source code is to be modified based on whether a line of source code represents writing data to variables that are defined in advance and are loaded onto the bus to be evaluated”. Applicant respectfully disagrees. Tammemae discloses logging the access of each variable and writing the logged data to a file that is read and interpreted by the estimator (page 2, paragraph 5, lines 1-3). Tammemae does not disclose or suggest writing data to variables that are defined in advance and are loaded onto the bus to be evaluated and does not disclose or suggest determining whether source code is to be modified based on what a line of source code represents. Instead, no determination is made and all variables are logged, not merely variables defined in advance.

Neither Raimi nor Chang overcome this deficiency in Tammemae, and the Examiner does not assert otherwise. It has been held by the courts that to establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art. See, *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). As illustrated above, the hypothetical combination of Tammemae, Raimi and Chang does not disclose or suggest writing data to variables that are defined in advance and are loaded onto the bus to be evaluated, or determining whether the source code is to be modified based on what a line of source code represents, and does not teach and every feature recited in independent claims 11 and 20. Thus, *prima facie* obviousness has not been established, and these independent claims are patentably distinguishable over the art of record in the application. Claims 12-19 depend from claim 11, and claims 21-26 depend from claim 20, each dependent claim incorporating all of the features and limitations of its base claim, so that these dependent claims are patentably distinguishable

over the art of record in the application for at least the reasons that their base claims are patentably distinguishable over the art of record in the application. Accordingly, applicant requests that this rejection be withdrawn.

### CONCLUSION

For at least the reasons set forth in the foregoing discussion, Applicant believes that the application is now allowable and respectfully requests that the Examiner reconsider the rejections and allow the application. Should the Examiner have any questions regarding this Amendment, or regarding the Application generally, the Examiner is invited to telephone the undersigned attorney.

Respectfully submitted,



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